IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A transfer apparatus for a target substrate, comprising:

a rotary base rotatable ~~about and~~ integrally rotatable with a rotary shaft;

first and second arm mechanisms ~~attached to the rotary base and~~ configured to bend and stretch, each of the first and second arm mechanisms including a proximal end arm attached to the rotary base, an intermediate arm, and a pick which are pivotally coupled to each other sequentially from the rotary base, and each of the picks being disposed to support the target substrate;

a link mechanism coupling the proximal end arms of the first and second arm mechanisms to each other to drive and interlock the first and second arm mechanisms, the link mechanism including a driving link and first and second driven links which respectively couple the driving link directly to the proximal end arms of the first and second arm mechanisms;

a first driving mechanism which rotates the rotary base, the first driving mechanism including a first motor that provides a driving force for rotating the rotary base and a first transmission part that transmits the driving force of the first motor to the rotary shaft; and

a second driving mechanism which drives the link mechanism so as to bend or stretch the first and second arm mechanisms in conjunction with each other, the second driving mechanism including a single second motor common to the first and second arm mechanisms and providing a driving force for swinging the link mechanism and a second transmission part that transmits the driving force of the second motor to the driving link.

Claim 2 (Previously Presented): The apparatus according to claim 1, wherein the link mechanism is configured to interlock the first and second arm mechanisms such that, when one of the first and second arm mechanisms is substantially in an extended state, the remaining one is substantially in a contracted state.

Claim 3 (Currently Amended): The apparatus according to claim 1, wherein the driving link is rotatable ~~about and~~ integrally with a pivot shaft that is rotatably supported by the rotary base, and the second transmission part transmits the driving force of the second motor to the pivot shaft.

Claim 4 (Previously Presented): The apparatus according to claim 3, wherein the pivot shaft of the driving link is arranged inside the rotary shaft of the rotary base to be coaxial with the rotary shaft.

Claim 5 (Previously Presented): The apparatus according to claim 3, wherein the pivot shaft of the driving link is arranged at a position shifted from the rotary shaft of the rotary base.

Claim 6 (Previously Presented): The apparatus according to claim 1, wherein the driving link substantially includes a single link lever.

Claim 7 (Previously Presented): The apparatus according to claim 1, wherein the driving link includes a plurality of link levers that are coupled to each other.

Claim 8 (Previously Presented): The apparatus according to claim 1, wherein the first driven link is axially supported by the driving link on a second arm mechanism side across a center line, and the second driven link is axially supported by the driving link on a first arm mechanism side across the center line, the center line being a perpendicular bisector of a line segment that connects centers of the picks of the first and second arm mechanisms in an initial state where both the first and second arm mechanisms are contracted.

Claim 9 (Original): The apparatus according to claim 8, wherein the first and second driven links are arranged at different height levels and intersect each other.

Claim 10 (Previously Presented): The apparatus according to claim 3, wherein the second motor is a rotary motor including a rotary output shaft, and the second transmission part couples the rotary output shaft to the pivot shaft.

Claim 11 (Previously Presented): The apparatus according to claim 1, wherein the second motor is a linear motor including a reciprocation body, and the second transmission part couples the reciprocation body to the driving link.

Claim 12 (Original): The apparatus according to claim 1, wherein the proximal end arms of the first and second arm mechanisms are rotatably supported on the rotary base about shafts which are spaced apart from each other on one plane.

Claim 13 (Original): The apparatus according to claim 12, wherein the picks of the first and second arm mechanisms are arranged to face in different directions on one plane, and an open angle of the picks is set within a range of 60° to 180°.

Claim 14 (Original): The apparatus according to claim 1, wherein the proximal end arms of the first and second arm mechanisms are supported on the rotary base to vertically overlap and be rotatable about one axis as a center.

Claim 15 (Original): The apparatus according to claim 14, wherein the picks of the first and second arm mechanisms are arranged to vertically overlap and face in one direction.

Claim 16 (Currently Amended): The apparatus according to claim 1, wherein the first and second motors respectively include first and second rotary output shafts formed of hollow pipes and arranged to be coaxial with each other such that the second rotary output shaft is disposed inside the first rotary output shaft, and

the apparatus further comprises a detecting mechanism configured to detect a rotational position, the detecting mechanism comprising:

a detection pattern disposed on an inner surface of the first rotary output shaft;

a light emitting portion for irradiating the detection pattern with light;

a light-transmitting window disposed on the second rotary output shaft to receive reflected light from the detection pattern;

a reflection member configured to reflect the light passing through the light-transmitting window in an axial direction of the second rotary output driving shaft;

a light-receiving portion which receives the light reflected by the reflection member; and

a position detector configured to obtain a positional relationship in a rotational direction between the inner and first rotary output shafts based on an output from the light-receiving portion.

Claim 17 (Currently Amended): The apparatus according to claim 16, ~~further comprising:~~

[[a]] wherein the light-emitting portion is configured to emit light in the axial direction of the second rotary output shaft; and

the apparatus further comprises a reflection member configured to reflect the light from the light-emitting portion in a radial direction to irradiate the detection pattern with the reflected light through the light-transmitting window.

Claim 18 (Previously Presented): The apparatus according to claim 16, wherein the light-receiving portion includes an image sensor configured to detect an image of the detection pattern.

Claim 19 (Currently Amended): The apparatus according to claim 18, ~~further comprising:~~

[[an]] wherein the illumination member is configured to irradiate the detection pattern with illumination light.

Claim 20 (Previously Presented): The apparatus according to claim 18, wherein the detection pattern includes an array of different color regions.

Claim 21 (Previously Presented): The apparatus according to claim 18, wherein the detection pattern includes an array of different figures.

Claim 22 (Previously Presented): The apparatus according to claim 18, wherein the detection pattern includes an array of regions having different lightness levels.

Claim 23 (Previously Presented): The apparatus according to claim 1, wherein the apparatus is preset such that the first arm mechanism or the second arm mechanism is stretched while the first motor is stopped and the second motor is operated.

Claim 24 (Previously Presented): The apparatus according to claim 4, wherein the first and second motors respectively include first and second rotary output shafts arranged to be coaxial with each other such that the second rotary output shaft is disposed inside the first rotary output shaft, and the first and second transmission parts are portions that integrate the first and second rotary output shafts with the rotary shaft and the pivot shaft, respectively.

Claim 25 (Previously Presented): The apparatus according to claim 5, wherein the first and second motors respectively include first and second rotary output shafts arranged to be coaxial with each other such that the second rotary output shaft is disposed inside the first rotary output shaft, the second rotary output shaft is rotatably supported by the rotary base, the first transmission part is a portion that integrates the first rotary output shaft with the rotary shaft, and the second transmission part comprises transmission components disposed inside the rotary base to couple the second rotary output shaft to the pivot shaft.

Claim 26 (New): The apparatus according to claim 1, wherein each of the first and second arm mechanisms is structured such that the proximal end arm is provided with a proximal end arm transmission part disposed therein and configured to transmit a force, generated by a swing of the proximal end arm relative to the rotary base, to the intermediate

arm as a force for the intermediate arm to swing relative to the proximal end arm, and the intermediate arm is provided with an intermediate arm transmission part disposed therein and configured to transmit a force, generated by a swing of the intermediate arm relative to the proximal end arm to the pick as a force for the pick to swing relative to the intermediate arm.

Claim 27 (New): The apparatus according to claim 26, wherein each of the first and second arm mechanisms is configured to bend and stretch while the pick retreats and advances in one direction.

Claim 28 (New): The apparatus according to claim 1, wherein the first and second arm mechanisms and the link mechanism are disposed in a transfer chamber, and the first and second motors are disposed in a casing hermetically sealed from the transfer chamber.

Claim 29 (New): A transfer apparatus for a target substrate, comprising:

a rotary base rotatable integrally with a rotary shaft;

first and second arm mechanisms configured to bend and stretch, each of the first and second arm mechanisms including a proximal end arm attached to the rotary base, an intermediate arm, and a pick which are pivotally coupled to each other sequentially from the rotary base, and each of the picks being disposed to support the target substrate;

a link mechanism coupling the proximal end arms of the first and second arm mechanisms to each other to drive and interlock the first and second arm mechanisms, the link mechanism including a driving link and first and second driven links which respectively couple the driving link directly to the proximal end arms of the first and second arm mechanisms, the driving link being rotatable integrally with a pivot shaft that is coaxial with the rotary shaft and rotatably supported by the rotary base;

a first driving mechanism which rotates the rotary base, the first driving mechanism including a first motor that provides a driving force for rotating the rotary base and a first transmission part that transmits the driving force of the first motor to the rotary shaft; and

a second driving mechanism which drives the link mechanism so as to bend or stretch the first and second arm mechanisms in conjunction with each other, the second driving mechanism including a single second motor that is common to the first and second arm mechanisms and provides a driving force for swinging the link mechanism and a second transmission part that transmits the driving force of the second motor to the driving link.